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COMMONWEALTH OF VIRGINIA
GOVERNOR'S OFFICE
RICHMOND

THOS B. STANLEY
GOVERNOR

WILDLIFE WEEK IN VIRGINIA

The wise use of natural resources -- soils, waters, forests, minerals, and wildlife -- is essential to the welfare and security of the individual, community, state and nation. The sound management of these resources cannot be achieved without the guidance and support of an informed and interested public.

Many of the birds, mammals and fish of the United States are facing extinction because of wasteful killing, and destruction of the foods, plants and shelter found within their original homes, and the absence of adequate programs for their protection and management.

The week of March 18 through 24 is being observed across the nation as National Wildlife Week, and as an expression of national interest in conservation and a means of stimulating greater public interest in the pressing problems of natural resource management.

I am glad to join in this observance by designating March 18 through 24, 1956, as Wildlife Week in the Commonwealth of Virginia. All citizens are urged to acquaint themselves with natural resource problems and, in keeping with the national theme, "Save Endangered Wildlife", to give particular support to programs providing for the preservation of those forms of wildlife that are in serious jeopardy by encouraging the preservation and wise management of their natural coverts in our forests, grasslands, streams, lakes, marshes, on arable lands, and within undeveloped and wilderness areas to insure that these animals and the esthetic and recreational benefits that accrue from them will be perpetuated for future generations.

Thos. B. Stanley
Governor

VIRGINIA WILDLIFE

Published by VIRGINIA COMMISSION OF GAME AND INLAND FISHERIES, Richmond 13, Virginia

A Monthly Magazine Dedicated to the Conservation, Restoration, and Wise Use of Virginia's Wildlife and Related Natural Resources, and to the Betterment of Hunting and Fishing in Virginia

COMMONWEALTH OF VIRGINIA

THOMAS B. STANLEY, Governor
Commission of Game and Inland Fisheries

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Cover

The white-footed mouse (Peromyscus leucopus) is native to Virginia and is common throughout the state. Along with the meadow mouse it is the most important single item of food for most of the flesh eaters—hawks, owls, weasels, foxes, and cats.

Commission Photo by Kesteloo

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And then there were none!

EACH year in March we take time out to say a word or two about Wildlife Week. We either carry the Governor's statement in full or say something editorially, or, perhaps carry an appropriate picture about the theme of the singular week.

This year, because of the importance of the subject, we're carrying all three. The Governor's statement—and a very fine one indeed—is on page 2, the inside cover. It is worth careful reading. In addition to these few editorial notes, we are carrying a full spread of pictures and text matter on pages 14 - 15 featuring Wildlife Week. All of which goes to show how important the occasion is.

The 1956 goal for National Wildlife Week, which is in keeping with Wildlife Week in Virginia as proclaimed by Governor Stanley, is to save our endangered wildlife—those wild creatures that are on the verge of extinction. The hope is that through the medium of this special -occasion week the general public will become better aware of the plight of the endangered species and what is needed to save them from extinction.

The plight of our wildlife today should cause us to make a sober appraisal of modern progress. The cost of present-day technology in terms *natural* is something that could stand careful evaluation. Twenty-one species of wildlife "gone"; another 60 endangered! We could go on and on, in every resource field, in every section of our land. But lamenting brings us nowhere. What is needed is an action program.

So, what can *you* do, what can *we* all do, to help the cause of wildlife during this one special seven-day period—Wildlife Week? Well, here are seven things that are suggested:

1. Plan conservation meetings with speakers or movies.
2. Arrange conservation programs for school assemblies. Perhaps class tours of a nearby game range, wildlife refuge or management area can be planned. Ask leaders of conservation organizations and the personnel of wildlife and conservation agencies to participate in these.
3. Sponsor window displays built around the conservation theme. Use hunting and fishing gear, mounted wildlife specimens, photographs and literature, slogans, etc.
4. Schedule radio and television interviews and commentary.
5. Secure news and editorial comment in local newspapers.
6. Sponsor educational tours of sanctuaries, wildlife refuges, management areas, national forests, state forests, fish hatcheries, or other conservation demonstrations.
7. Organize local, state and regional committees to encourage and support efforts to protect endangered forms and restore their natural habitats. The part of these organizations in encouraging the enforcement of adequate protective laws, the re-establishment of favorable food and cover plants and preservation of the habitats of the endangered forms is an extremely important one.

Yes, these things and more we can do if we really want to help. And in the act of helping we will be doing something that will be of lasting benefit to ourselves and the many who are destined to come after us.

Sure, there are folks who can live without the wild things of nature, and, there are other folks, in the minority to be sure, who cannot.

Like the whine of the wind through the trees, or the sunrise, or the boom of the crashing surf, wild animal life in America came to be taken for granted until gunpowder and machines began doing away with them. A stand must be made; a decision must be taken. Man today must decide "whether a still higher 'standard of living' is worth its cost in things natural, wild and free." He must decide quickly and wisely before it is too late.

For the many in the minority, though not enough to be sure, the opportunity to see a whooping crane take off for the northern breeding grounds is more important than a movie, and the chance to spot a Key deer in a palmetto edge is a heritage as inalienable as our freedom of worship.

Wildlife is part of our national heritage, just as is our soil, water, plant life. Without it, we would be a poorer nation, poorer people. In our democratic system of government we are given many rights and privileges that are not enjoyed in any other country. Our acceptance of these obligates us to work for the things in which we believe. —J. J. S.

Cooperation with all agencies doing conservation work has long been the established policy of the Virginia Commission of Game and Inland Fisheries. The work with Soil Conservation Districts embraced well over 1,000,000 agricultural acres in 1955.

WHAT THE COMMISSION OF GAME AND INLAND FISHERIES IS DOING TO PROMOTE ACTIVITIES OF SOIL CONSERVATION DISTRICTS

By I. T. QUINN

Executive Director

IT has long been the established policy of the Virginia Commission of Game and Inland Fisheries to cooperate actively with all other agencies doing conservation work in the waters and on the lands of this Commonwealth. We are frequently asked the question as to what the Commission is doing to promote the work of the Soil Conservation Districts. I can best answer that question by giving some factual data. Going back to the year 1950 we were doing cooperative work and with approximately 2,300 farm landowners in the State. There has been a gradual increase in the number of farm landowner cooperators from that year until the close of 1955 when we were cooperating with approximately 4,900 farm landowners. This cooperative work embraced agricultural acres from a little over 650,000 in 1950 to well over 1,000,000 in 1955.

In this cooperative work with farm landowners, we supplied plants and seeds for use in soil erosion prevention and as food patches for farm game such as bobwhite quail and rabbits. Up through 1952 the field staff of the Commission delivered all plants and seeds in person to cooperating farmers. Beginning in 1953 the Soil Conservation Service assisted in the delivery to the farmers of plants and seeds for use on the farm. The field staff of the Commission, especially the wardens and game technicians, continues to deliver to the farmers most of the plants and seeds which are used in our cooperative work with the landowners.

In 1950 there were delivered to cooperating farmers 1,122,000 bicolor plants. This continued to increase through 1952. By that time the Commission, the landowners and the Soil Conservation Service had learned that the greatest success was being obtained through the planting of bicolor seed instead of the plants. The result has been that we began reducing the number of plants and increasing the seed. Not only bicolor seed is supplied but combine milo seed mixtures and sericea lespedeza. The number of bicolor seed being supplied to the farmers at the present time approximates 2 tons, while combine milo seed approximates 2½ tons

and the seed mixture more than 20 tons, while the sericea lespedeza seed amounts to approximately 4½ tons each year.

The Commission not only furnishes farmers available seeds and or plants to plant wildlife borders and food patches and for soil erosion prevention purposes, but supplies the information as to how and where these plants and seeds should be utilized. In doing this, the Commission, jointly with the Soil Conservation Districts, makes plans for the distribution of planting materials to cooperating farmers.

We also give cooperators supervision and advice in planting border food patches and other wildlife conservation measures. We provide follow-up for farms, employing wildlife conservation measures to aid in making these measures effective.

We furnish appropriate signs and erect same along highways at strategic food plantings for the purposes of informing the public of the work that is being done to improve wildlife habitat on the cooperating farmers' lands.

Through its wardens and technicians the Commission contacts farmers, sportsmen groups, 4-H Clubs, FFA Chapters, and other organizations to interest them in wildlife restoration through habitat improvement.

We endeavor to interest farmers in a proper land use and soil and water conservation plan for their farms and if the farmer is not in contact with the Soil Conservation Districts facilitate these contacts by recommending that he participate in the Soil Conservation Districts program.

We gather as much concrete information as possible pertaining to the benefits derived from habitat improvement and make this information available to the personnel of the Districts. We conduct "show me" tours of wildlife plantings and other conservation measures in cooperation with the Virginia Extension Service.

We believe that the cooperative effort which is being utilized by the landowners upon the recommendation of the Commission is bearing fruit. Of course, we realize that we are just beginning to scratch the surface. While we are actively cooperating with nearly 5,000 farmers, we realize that there are approximately 145,000 farmers who are receiving benefits only indirectly from the program which is underway. It is our hope that we shall be able in the future to increase our direct cooperative efforts to the end that soil may be conserved and wildlife will be improved on the farm.

TAKE A BOY FISHING

By ALBERT M. DAY*

"TAKE a boy fishing" has more behind it than merely a pleasant day on lake or stream with an eager, youthful companion. It entails responsibilities.

This fine slogan brings home to us adults the realization that we must not only furnish good fishing to the boy of today, but to the man of tomorrow.

Perhaps we are one of the lucky few. We know a cool stream where the spotted trout may rise to a fly today; a lake where the bluegills are still plentiful; where the plunk of a bass plug among the weed patches will bring smashing response, or the retrieve of a wobbling spoon will entice a pike to strike with hungry power. But how about tomorrow? How about the day when the boy becomes a man? Will the fishing still be good then?

We hold the answers to these questions in our own behavior. It is our job to do something about them. We can't wait for the boy to solve his own troubles, because the accelerated pressure on sport-fishing today has brought us problems and responsibilities that cannot be put off. The issue is with us now.

America has no few frontiers insofar as sport-fishing is concerned. We have already exploited all of the available areas within the United States and are rapidly closing in on the few wild spots still left on the continent. It is up to conservation interests to see that our known waters produce at the highest possible rate. It is up to present administrators to see that the boy you take fishing today may look forward to doing the same for another bright-eyed youngster in the years ahead.

Clean, productive waters - waters studied to determine maximum possibilities of the kinds and quantities of fish they will support, then stocked to those levels - waters held inviolate against drainage operations and pollution - waters maintained for their great recreational values.

"Take a boy fishing?" Of course. And may it be GOOD fishing!

* Mr. Day is former director of the U. S. Fish and Wildlife Service and now with the Arctic Institute of America. We've carried Mr. Day's messages before and, it being March, this one in particular is worth repeating.

INSECTS, WILDLIFE AND MAN

By DAN E. CANTNER

Special Services Officer

U.S.D.A. Photo by Forsythe

Insects' most beneficial role is the fertilization of plants through pollination. Note the pollen-covered bee on this cotton blossom.

IT IS hard to conceive of wildlife and man living without insects. A sudden catastrophe ridding the world of insects would deprive animals of many foods. Many kinds of pollination would no longer occur and there would be, for example, no more fruit orchards. There would be no seed for future planting. Most land birds would vanish from the earth and many fresh water fishes would disappear from the streams. With no burrowing-insect action in the soil, fertility would suffer and the productive capacity would decline. Lowered fertility of the soil would result in poor crops, poor wildlife, poor economy for man.

Let us examine the insect world that plays such an important role in the existence of wildlife and man. Quite often people become alarmed at the mention of the word insect. Many feel that insects are only a plague to man. Every clear-thinking person concerned with maintaining or increasing mammals, fishes and birds must realize that insects play an important part in the food chain that serves all life. Many mammals eat insects and some are dependent upon them for their existence. Among these are the skunks, bats, bears, several squirrels, mice, shrews, moles, badgers and rats. Many of these in turn serve as food for larger animals in an endless and complex food chain of nature.

Flycatchers, nighthawks and swallows feed entirely upon insects while other birds utilize insects as a source of protein in their diets. During the nesting season insects make up a large percentage of the diets of young birds. A chickadee was observed during a 30 minute period feeding its young. During this time it made 35 trips to the nest, not with a single insect, but with the bill full each time. A 15 hour and 45 minute vigil on a house wren nest revealed that the bird fed its young 1217 times! Obviously, insects are important to song birds and game birds alike. Fields and grassy edges are heavily utilized during the height of the insect season by all birds.

No one knows exactly how many species of insects exist in the world today, but entomologists, who are the experts of the insect field, have estimated the number of different species already classified at from 625,000 to 1,500,000. On our continent north of Mexico we have approximately 82,500 kinds of insects plus an additional 2,613 kinds of ticks and mites, which are not true insects.

Recent estimates of the number of species, if all were classified, runs from 2,500,000 to 10,000,000. A guess as to the total number of individuals in the insect world would be almost impossible. Certainly it would run into fantastic figures.

The oldest known insects of record originated during the Upper Carboniferous period some 250 million years ago. This find was made in the shales laid down by a deep fresh-water lake in central France. Spectacular among the insects of this geologic time were the Protodonata. These insects resembled dragonflies and were covered with strong spines. Fossil remains of these creatures have been found in France, Kansas and Oklahoma. Specimens have been found with a wingspread of 30 inches and a body length of 15 inches. Since birds and other flying vertebrates had not yet entered the picture at this early period, these huge insects probably ruled the air.

The information obtained from fossils indicates that insects were as numerous during prehistoric days as they are at the present time.

Insects are found in a variety of habitats in the world, ranging from extreme heat to extreme cold. One insect is found in the mud of hot springs where temperature

may go as high as 120° Fahrenheit. Others, such as the so-called ice-bug, or alpine rock crawler, are found at altitudes from 5400 to 8600 feet above sea level. This insect is happy at 38°F, a temperature at which most insects are dormant. Insects, completely white and blind, are found deep under the earth's surface in lightless caverns.

Size is another variable characteristic, for insects range from the very minute to exceptionally large. Fairy flies measure only one-hundredth of an inch. The giant moth in India, the Atlas moth, has a wingspread of one foot. A walkingstock in the eastern part of India measures 15 inches in length.

Although a great number of insects are harmful (estimates range from 6,500 to 10,000 species) there are many which are helpful to wildlife and man. Soil is constantly being improved by the burrowing action of ants, grubs, beetles and wild bees. This action allows air to penetrate the soil and moves deep lying soil to the surface, improving its physical condition. The reverse of this takes the decaying vegetable and animal matter deep into the soil and enriches it for plant use. A great many wood-inhabiting termites, beetles and ants have grubs or larvae at work constantly devouring and breaking up tree trunks, leaves and twigs which return to the soil and provide nutrients for future plant growth.

Many insects speed up the decay of animal bodies and thus hasten their return to the soil. Insects figure prominently in the continuous cycle of nature and are important to a balanced environment.

A great many insects are helpful to man. Some, even though frightful in character and habit, act as a control or check on other insect populations through attacking them. Such individuals are known as predators and parasites. Most important of these are the dragonflies, mantids, damselflies, aphis-lions, ground beetles, lady beetles and syrphid flies.

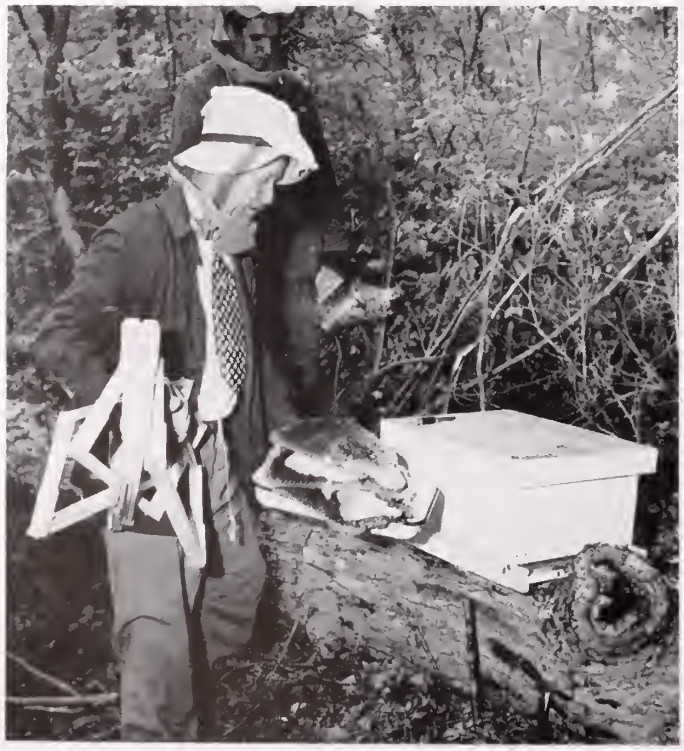
The young of dragonflies and damselflies, known as nymphs, destroy numerous mosquito larvae and other insects in the water.

Aphis-lions are some of the most helpful of insect predators. They destroy all stages of plant-feeding mites, scale insects, aphids and mealy-bugs in addition to many destructive insects and the eggs of several caterpillars. This predatory action has an immeasurable effect on the success of food crops.

The praying mantis, which receives its name from the odd position in which it holds its front legs, is one of the most efficient of the insect predators. This predator can capture and consume large insects of other species. It is also cannibalistic. The female consumes the male with which she mates. Often it devours its own offspring. Despite its terrible character, the praying mantis is an asset to any garden during the growing season.

Lady beetles, probably misnamed due to their unladylike habits, kill and readily eat many soft-bodied insects. They devour a great number of eggs and young of aphids, scales and other soft-bodied plant-feeding insects. Certainly without the presence of these predators, fruit, grain and vegetable crops would suffer.

Silk, one of our finer materials, originates in the spittle of the silkworm. The source of silk was kept a secret in China for more than 2000 years. The punishment for removing silkworm eggs from that country was death. It was not until 555 A.D. that a few eggs were smuggled out of China to Constantinople and commercial produc-



Insects are of value to man in many ways. Honey bees provide honey for the table and beeswax, a quality secondary commodity.

Although a great number of insects are harmful (estimates range from 6,500 to 10,000 species) many are helpful to wildlife and man.

The praying mantis, a predator on other insects, captures and consumes large insects of other species. It is also cannibalistic, the female consuming the male with which it mates.

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tion sprang up in some of the warm countries of the world.

An important service performed by insects is their work of pollination. In their daily visits from plant to plant in search of food, insects carry pollen on their legs and body aiding in the reproduction of various food plants and flowers. The success of a good vegetable garden or flower garden is dependent upon the feeding activities of several species of insects.

Reproduction in the insect world is remarkable but fortunately predators, disease, insecticides and adverse weather conditions hold the population in balance. An example of the tremendous reproductive capacity of the insect world is the common house fly. If all the descendants of one pair of house flies lived during one summer season (April to August) and reproduced normally, the total population at the end of this five month period would amount to the fantastic figure of 191,000,000,000,000,000,000.

Another example involves the aphids, or plant lice. The cabbage aphid produces an average of 41 young per female and an average of 16 generations between March 31 and October 2. Assuming that all the offspring lived, the descendants of one female aphid would amount to 1,560,000,000,000,000,000,000,000.

A spectacular incident, which was probably the result of high reproduction occurred in this country during the 1870s when swarms of Rocky Mountain grasshoppers literally destroyed vast areas of the Great Plains. One observer used surveying instruments and binoculars in estimating one of the large migrating swarms. This column averaged one half a mile in height, 100 miles in width and 300 miles in length. With an estimate of 27 locusts per cubic yard, this would amount to 28 million per cubic mile. The swarm was this size for approximately six hours and moved at least five miles per hour. The observer calculated that more than 124 billion locusts were in this specific column.

One of the most fantastic feats of the insect world involves an African termite. The queen lays eggs, at regular intervals, one every few seconds for approximately 10 years. During this 10-year period the queen deposits approximately 30,000 eggs a day, 10 million a year and 100,000,000 in her lifetime.

Mating in the insect world, much to the surprise of many people, is accomplished in most species through copulation, as in mammals. There is a transfer of sperm to the egg and a new generation thus develops. In most species mating occurs on the ground but some insects mate only during flight. Several species of wasps and bees mate in this manner as well as some mayflies and ants.

The length of life after mating varies considerably among the various species. The male honeybee lives only a short time after mating. A male termite may live for several years after mating. The female tussock moth, which is wingless, lasts only long enough to lay her eggs. Upon emerging from the cocoon, her abdomen is enlarged with eggs that are fully developed and ready for fertilization. Scent glands present on the female attract a male and fertilization of the eggs takes place. After depositing her eggs, the female dies because her mission in life is completed.

The modern world in which we live today is geared to such a fast tempo that little time is left for people to enjoy nature. Humanity is currently faced with two very old problems: living with itself and living with its natural surroundings.

One of the best methods of working out these problems is to have a high percentage of the population interested in conservation since it deals with the appreciation and intelligent care of all living things. The sooner we all become interested in nature, the sooner we will start building a better world in which to live. A knowledge of insects and their habits is essential to our complete understanding of that world.

"The big fish gave a powerful thrust . . . and twisted away."

Lute, the Slippery Otter

By PAT CECIL

THE moon was rising slowly over the snow-crusted hills when Lute, the Otter, awoke in his den. He left the warm, grass-lined sleeping chamber and glided swiftly through the sloping tunnel to the entrance which opened into the swift-flowing water of Onnetuk Stream. Slipping into the water, he swam briskly up the current, his small black eyes questing under every sunken log and into every nook and cranny of the shallows for his prey. For Lute was hungry, and in search of any fish who might be idling quietly unawares, fins moving slowly in the current.

For many yards Lute swam under water, using his webbed feet and his strong tapering tail to good advantage as paddles and rudder, darting here and there. Finally he came up for air, his sleek flat head breaking the surface with scarcely a ripple, glinting darkly in the moonlight. Down he went again, and this time, in a black pool, his sharp eyes caught sight of a whitish body. Like a streak the trout shot into a tangle of submerged brush, but Lute was faster, darting like the very eels he loved to eat, his strong jaws open for the kill. The otter's sharp teeth closed on the tail of the twisting trout, a big and seasoned veteran of many a bout with the angler's rod. The big fish gave a powerful thrust of his side fins and twisted away, straight down into the rapids.

Recovering with the speed of light, the otter turned and lunged close behind again. This time his aim was true, and there in the rushing water between two jagged rocks he overtook the luckless fish and in one sure bite at the base of its skull he made his kill. He feasted and then, satisfied, he turned upstream again to seek what the night might hold.

Some weeks before, Lute had left his old hunting grounds on an upper branch of the Nywoquoit, and had set out overland to seek a new range. The hard Canadian winter had come early and the Nywoquoit, being a sluggish stream with only a few fast rapids to keep the water moving, had frozen almost solid and ruined his hunting. For Lute was a fisherman and though he would

eat almost any small animal if need be, most of his food consisted of the trout that abounded in his stream, and the eels that lived in the mud. Occasionally when the salmon were running he would go up the stream to the fork where it joined a larger river and gorge for days on the luscious pink-meated fish. This winter, however, the hunting was poor and in January, when his litter of four, born the April before, had reached maturity and scattered to hunting grounds of their own, Lute and his mate left the Nywoquoit and proceeded by easy stages to find a new range. They travelled far, for theirs was a wild and desolate country where the trappers and hunters come rarely, and the otter folk found peace and thrived. So it was that there were several brown male rivals with domains in Lute's territory and he crossed many a creek and stream before he came to the Onnetuk, where he found, finally, no sign of prior ownership by one of his own kind.

When the pair of otters was established snugly in the new burrow, life took up an orderly pattern again and they spent most of their days sleeping, with the nights for hunting or playing in the rippling waters of the stream. Tonight Lute was in fine fettle and his rich brown fur, so prized by the trappers for its durability, showed the effects of his good health. Now that he had eaten he was no longer interested in hunting, but still he made his way up the stream, for the new range was still somewhat unfamiliar, with many yet to be explored sections.

Without warning a small fish popped away from the far side of a sandbar, and though he was no longer hungry, Lute shot into action, almost without thinking. The fish raced straightaway, too late realizing its mistake, for Lute could outswim any fish and with an extra surge of speed in his long muscular body and tail, he quickly closed on this one. He bit off the head and ate it unenthusiastically, letting the mangled body drift downstream, to be washed ashore and grabbed by some other prowler of the night.

After a few minutes the big otter walked onto a gravelled beach and stood sniffing the cold air, listening to the silence of the black hemlock woods behind him. He heard the yap of a fox on the distant ridge and nearby the agonized death squeal of a rabbit as Lute's vicious cousin, the weasel, took it unawares.

Then once more he plunged into the water and this time he went purposefully back downstream, swimming steadily. He had hunted and explored and now it was time to play. Lute was making his way to his favorite playground, the slide. There on a steep bank the otters had fashioned a runway, by first one and then the other going by a devious trail to the top of the bank, then sliding straight down into the water until the bank was a slick muddy chute. Here the otters came at night, to play in the strange carefree way of their tribe, gambolling about in the moonlight, first one and then another rushing to the top of the slide and plunging on their bellies like greased lightning into the water. There they would dive and float and chase each other in games of tag like small boys playing hookey from school. Young and old alike would come to the slide, for here in the spring the female otters would often give their young their first lessons in the fearless approach to water that is so necessary to an otter's existence.

Tonight, however, only three or four otters were at the slide—two young ones and an old male from a neighboring range. Rivalries were forgotten and the group played for hours, their sinuous bodies glistening like oiled mahogany as they moved with almost unbelievable grace in the water and on the bank. Endlessly Lute climbed to the top of the bank and plummeted down, rolling ecstatically when he hit the water, floating to rest and beginning all over again.

But soon the moon sank low in the sky and the hush of early dawn pervaded the woods. One by one the otters slipped silently away, till Lute was left alone and then, after a final plunge, he too took himself off toward his den. As the first gray light began to show in the east, he reached the underwater tunnel, made his way into the snug chamber and settled peacefully to sleep.

"Remsen's Roost"

By ALFRED MORDECAI

Thar's a 'treat thar in Fuhginya
What some calls "Remsen's Roost";
Tain't no big, pertenchus Inn,
Tain't no place fer a Duke;
Hit's jest a hillside dwelling
Witha kitchin and a po'ch
Whar "Rem" kin set wi' pipe 'n dawgs
Fer a long and pensive smoke
In the silent, dreamy stillness
As th' evenin' shadows fall
An' th' breezes softly whisper
In th' pines so green an' tall
While th' edges o' the lake
'Flect a glitter and a gleam
As th' didappers swim about
In th' shadows and th' sheen.
Oh, gimme a man like "Rem"
With houn' dawg, an' love o' sod,
May God forever love him,
As he loves Almighty God.

(The bird referred to in this poem is the pied-billed grebe. — Ed.)

THE THING

By BILL SNIDER

Warden Thieman (left) and Gene Thieman (right) with the nutria trapped at Back Bay.

IT WAS a cold, brisk morning as Tom Pallett and Russell Hill pushed their trapping skiff through the marshes of Back Bay. There were little mirrors of ice along the edge of the water and the reeds crackled when the skiff rubbed along the bank of the narrow creek.

Nosing the long skiff up against a mud bank, Tom hitched up his high rubber boots and stepped off in the marsh. One of his flapper traps, set for muskrats, was gone. So was the wooden stob that held it in place.

Stooping down for a closer look, Tom heard his bulldog, "Tippy" growl over in the marsh a short ways. Startled, he looked over that way and what he saw almost made him sit down in the cold water behind him.

There was his trap all right, but it was hooked on to the paw of the biggest dern muskrat he ever saw. It was three times as big as any muskrat Tom had ever come across in all the years he had trapped while not working as a gunning guide at the Sandbridge Gunning Club on North Bay.

"It was a fearsome sight sitting up on its hind legs and fighting at the dog," Tom said later. "It's long front teeth were clicking so loud I could hear them clear over where I was."

Tom grabbed a shoving paddle from the skiff and went to "Tippy's" rescue. With the long ash paddle as an equalizer, it didn't take long. The "thing" was dead.

Tom and Russell finished running their trapline. Pushing the skiff helped erase some of the chills that had been running up and down Tom's spine since the encounter. Later that day, he telephoned the game warden, Gene Thieman, at the Back Bay headquarters, and asked the warden to take a look at his catch.

When Thieman saw the animal he identified it as a nutria from South America. A dictionary check confirmed the warden's suspicion and identified the animal as a nutria or coypu, "a South American aquatic beaver-like rodent (*Myopotamus coypus*), about two feet long, with webbed hind feet and round tail."

How did South American animal get to Back Bay? It's a long swim from there. Warden Thieman didn't have any theories and neither did anyone else who had seen Tom's catch by this time.

Thieman took the problem to his supervisor, Roland O. Halstead. Halstead seemed to remember that some had been introduced in North Carolina a few years back, in the area of Tull's Creek or Northwest River. As a matter of fact, there had been reports of other nutria catches in North Landing River and Back Bay.

Charley Gilchrist, a Commission waterfowl biologist who was banding ducks in the Bay when Pallett snared his "thing," confirmed the Carolina report and agreed with Halstead that it probably migrated from there.

Joe Shuffler, a federal warden, also on hand when the animal was being photographed by a local newspaperman, said he recalled that some had been introduced in Maryland about 1938.

An examination of the nutria showed that it was a male of the species. It weighed between 10 and 15 pounds and measured three and a half feet from the tip of its nose to the tip of its tail. The body was about two feet long, as the dictionary had stated. The webbed rear feet were peculiar in that four of the toes were webbed and a fifth was not. The single toe, which looked much like a thumb, was on the opposite side of the paw from the position of the thumb on a hand. The tail was round and looked more like a 'possum's tail than a muskrat's.

The front teeth, which were similar to those of a beaver, measured one inch for the uppers and two inches for the lowers.

Tom didn't want his prize, so Thieman got permission to have it mounted. "I'll send it to the Commission's office in Richmond and let them put it on display," he said.

VIRGINIA WILDLIFE

CONSERVATIONGRAM

Commission Activities and Late Wildlife News . . . At A Glance

DEER AND TURKEY KILL IN VIRGINIA. So far returns on the turkey kill in Virginia this past season totaled 2,691 as against 2,082 for the previous year, says C. F. Phelps, chief of the Game Division. The deer kill so far reported in the state is 14,220 in contrast to 14,163 last year. It will be recalled, says Phelps, that deer were taken in a number of counties during 1954-55 whereas only one area in one county west of the Blue Ridge allowed the taking of antlerless deer and, on the last day of the season, four counties permitted the taking of antlerless deer east of the Blue Ridge.

DROUGHT DELAYED TROUT PLANTING IN MOUNTAINS. According to G. W. Buller, chief of the Fish Division of the Commission, reports that the Commission was late in getting started with trout planting because of extreme low water resulting from continued drought in October, November and December.

LADY TURKEY HUNTER REALLY CALLS UP THE BIRDS. Mrs. Earl W. Messenger, of Powhatan, is one of the outstanding hunters of her sex in Virginia, with the enviable record of 21 turkeys bagged during the past 26 years. Mrs. Messenger does her own calling and is certainly one of the most successful turkey hunters in the state in outwitting this wariest of all wild game birds.

THOUSANDS OF ESSAYS COME IN FOR CONTEST DEADLINE. Thousands of essays entered in the Eighth Annual Wildlife Essay Contest came into the Commission offices from schools all over the state in time for the contest deadline which was February 29. Many more schools entered and more essays were written than ever before since the contest was begun. It is jointly sponsored by the Commission and the Virginia Division of the Izaak Walton League.

RESOURCE USE EDUCATION COUNCIL BOOK PUBLICATION. Five thousand copies of A Look at Virginia's Natural Resources have been published for participating conservation agencies of the Virginia Resource Use Education Council, in cooperation with the State Board of Education. The booklet deals with the natural resources of soil, water, forests, wildlife, fisheries, and minerals and the chapters were prepared by the various resource agencies concerned: Virginia Commission of Game and Inland Fisheries, Virginia Fisheries Laboratory, Virginia Water Control Board, Virginia Division of Forestry, State Geologist, and Virginia Division of Water Resources of the Department of Conservation and Development, Virginia Agricultural Extension Service, Virginia State Department of Education, Randolph-Macon College, Longwood College, University of Virginia Extension Service, Virginia Polytechnic Institute, Virginia Cooperative Wildlife Research Unit, U. S. Forest Service and the National Park Service. The booklet will be particularly valuable as resource material for pupils and teachers in connection with the study of Virginia history, geography and government in the seventh grade.

NEW COMMISSION REPRINTS AVAILABLE. Weed Control in Small Ponds, by Dr. L. M. Dickerson, is the most recent Educational Leaflet available from the Commission. Hunting in Virginia, by J. J. Shomon, Editor of Virginia Wildlife, has been reprinted from the magazine. Either may be secured by writing to the Commission, Box 1642, Richmond 13, Virginia.

Slowly and surely the American wolverine is being reduced in numbers. Estimates place the total population as less than 25,000.

National Audubon Society Photo

Down to 28 birds is the whooping crane.

Only about 1,000 nesting pairs of t

Of the six species of elk that remain, the tule elk and Merriam elk are down to small remnant herds.

Going . . . Go

Pictured here is the story of what is happening—and proud picture for Americans. Nor is it a complete picture.

Since George Washington's day a regrettable 21 spec from the North American continent. Some 60 more spec

Those in greatest danger are the whooping crane, Ca glade kite, desert bighorn, and the American bald eagl of action need be taken to help reduce the possibilities of during Wildlife Week, March 18-24. Here's where and l

1. ***Promote coordinated research* on endangered f safe population levels.**
2. ***Encourage programs* of federal and state agenc natural environments.**
3. ***Stop the wanton and accidental slaughter* of re tion of habitat through unwise drainage and pollut grasslands, and misuse of agricultural lands.**
4. ***Work for the establishment* of comprehensive u**
5. ***Initiate educational campaigns* to create pub**
6. ***Protect the integrity* and defend from encroachn parks, forests, wilderness and management areas**
7. ***Work for effective pollution control* laws and p**
8. ***Support the efforts* of conservation agencies.**

National Audubon Society Photo

Gone forever from the North American continent is the great auk. It disappeared in 1844.

All Photos Fish and W

Down in alarming numbers is the eastern white-winged dove.

Still badly persecuted is the disappearing cougar.

Few in numbers today is the peregrine falcon.

ld eogle remoin in North Americo.

The soge grouse hos been greatly reduced in numbers.

Another member of the weosel family in o bod woy is the northern coniferous forest-loving fisher.

ng . . . Gone!

at has happened—to our American wildlife. It is not a
ny more species than are shown here are in jeopardy.
or subspecies of American wildlife have disappeared
are threatened with extinction.
rnia condor, Eskimo curlew, grizzly bear, Key deer, Ever-
low long will they last? Can they be saved? What course
inction? These, and other questions, are being pondered
you as a citizen can help:
s of wildlife to determine methods for restoring them to

designed to protect endangered wildlife and restore

ant populations of endangered wildlife and the destruc-
of wet lands, burning and other abuses of forests and

policies at the national, state and local levels.
awareness of the plight of endangered wildlife.
t those state, federal and private sanctuaries, refuges,
ich are maintained for the benefit of endangered species.
rams for our streams, lakes, marshes and coastal waters.

Trumpeter swons, olthough down to 577 birds, are on the slight increose.

National Audubon Society Photo

The lost Lobrodor duck vonished from Americo's eost coost in 1878.

e Service Unless Noted

The heath hen vonished within our memory. (1931)

The Florida Key deer is moking o gollont struggle for survivol.

The glossy ibis is hovering on the brink of extinction.

The production of food is an important consideration in Virginia's farm and forest game programs.

To maintain and increase wildlife

FOOD IS PARAMOUNT

By WILLIAM C. KELLNER

IN Virginia our late winter months are a most critical period for wildlife. March is no exception. Though winter and spring meet in March and there is much sign that a new world is awakening out of doors, a closer look will reveal that wildlife has little to eat. In a country such as Virginia, where most of our winter months remain open and the ground is free for food searching by animals and birds all fall, the worst period of all for wildlife is the short period of late winter just before the birth of spring. Like a wind-swept henyard, little food is then to be found. And the paradox of the whole situation is that after a long, cold, arduous winter, wildlife now needs food the most. Food is paramount!

During late fall and early winter all wild creatures feed heavily, storing food in the form of fat, as if by some instinct they are anticipating lean months ahead. It is unusual to find starving wildlife at this time of year. Such a situation makes it difficult to convince sportsmen, some deer hunters for instance, that there are too many deer for the food supply on a given range. The deer they kill in November or December are plump and fat. By March, however, the situation may be different. Animals would have used up their stored body tallow and protruding ribs and hip bones would be apparent through taut hides. The effects of the lack of proper food are then very apparent.

In good years there is a tremendous production of natural usable foods from the lowly weed seeds to the mast crops produced by our largest shrubs and trees, including the important acorn-producing oaks. However, early frost, extreme droughts, unseasonable rain or some other act of nature often causes a local crop failure. When food isn't produced over an extended area, wildlife is sure to suffer. Wildlife biologists, too, have found out that *quality* of foods is important to wild animals just as it is in man. Many times the *quantity* of food for a given wild animal is apparently adequate but the animal is emaciated and scraggly due to poor food quality.

Some animals hibernate and others do a lot of winter sleeping during the harsh cold months of winter. Little energy is exerted then and the accumulation of stored fat is burned slowly. By not eating very much, these animals take some of the pressure off the remaining food supply.

To add to the dilemma, however, cold snaps in the north bring down hoards of migratory birds from our more northern states and Canada. This influx of new mouths to feed hastens the depletion of the abundant food found during the fall harvest. The palatable easy-to-find food is rapidly consumed, making late winter feeding a more strenuous task.

Since food is the key in limiting the number of birds and animals that will live to be the brood stock for another crop of wildlife, thinking landowners and sportsmen should be interested in helping increase food for these lean months. Most wildlife must eat reasonably well 365 days out of every year. There are several ways to help wildlife.

Winter or artificial feeding is one method and implies a temporary method of hand feeding wildlife. This might be fine for extreme local conditions or for attracting or holding some animal or bird. However, a more permanent natural method, such as planting food-producing plants, shrubs, or trees, is far better.

The Virginia Game Commission, through its game division staff, is promoting a wildlife habitat improvement program designed to increase wildlife. It is based on the best known wildlife management practices. Other things are given consideration, of course, but food production is an important aspect of the work.

A plantation of blight-resistant Chinese chestnuts. Note the fine wire enclosure erected to protect the young seedlings.

A farm game food patch located near adequate cover so wildlife using it will have some protection from predators.

The farm game program evolves around a plan to produce more food and better living conditions for quail and rabbits. A popular part of this program is the planting of food patches of about 1/8 acre each. These patches are planted in one of several varieties of perennial lespedeza or an annual game-bird mixture, including soybeans, cow peas, German millet, brown top millet, milo, rape, buckwheat, and Korean lespedeza. The latter will reseed itself for three or four years. The important thing is to locate the food patch near adequate cover or it won't be used fully. Predators on foot and wing soon locate a feeding area, so a way of escape must be close at hand for the protection of the wildlife using the patch.

On the other hand, experience, over a long period of time, has shown that the slow-growing perennial lespedezas are sometimes nipped by early frost, especially in the mountain areas, and fail to produce a seed crop. These perennials have not been the "cure all" for farm game that the game biologist had hoped to find.

The production of food is also an important consideration in Virginia's forest game program. Wildlife must eat, whether it lives on farmland or in the forest. In forested areas plantings are made in forest clearings and along access roads and trails. Mast-producing trees are released by cutting the less desirable species to give them light and growing room. The better species of wild grape and other quality food producers are encouraged by letting the life-sustaining sun reach these plants.

Proper food during the critical winter months can insure healthier and greater numbers of brood stock for the next breeding season. Leave crop remnants in the field, a strip of standing grain along a fence row, plant a food patch (the Game Commission will furnish the seed and instructions for planting). If emergency conditions warrant, establish a feeding station and scatter grain where natural food is scarce.

Well-fed game can better withstand the temporary hardships of severe weather. Wild birds and animals are tougher than we think and many gird themselves with special protections for cold winter living: the thick heavy winter coat of our fur-bearing animals, the inch thick insulation of down and feathers on waterfowl, or the cilia-like protrusions that the ruffed grouse develops on its toes for walking on top of snow during the winter months are examples, but, no matter how good the adaptation, all wild creatures are at their best under well fed conditions. When they are weakened by hunger they succumb more readily to any adversity. With adequate food, water, and cover we can be sure that healthy, productive brood stock will survive the rigors of winter to bring off a new crop of wildlife so that the hunters of Virginia can look forward to another bountiful harvestable surplus of game for the 1956-57 hunting season.

THINGS YOU MAY NOT KNOW

Whales often "hold their breaths" for as long as fifty minutes. They, like all other mammals, however, can drown if they get water in their lungs.

The compound eyes of the Dragonfly nearly encompass its head. Each large eye is composed of 20,000 individual units! The tiny jewel-like structure in the center of the head is one of the Dragonfly's simple eyes.

With Our Deer Herds--

IT'S LATER THAN YOU THINK

By STUART DAVEY

Leader, Deer Investigations

IN the past 25 years literally millions of words have been spoken and written about deer herd management. Perhaps half of them were used by game managers in their battle to establish and then to control the herds as they succeeded. Probably the others were uttered by some sportsmen in protest against recommended control measures.

What brought all this about? Simply this, that practically every state in the eastern United States with a patch of forest land has fostered the return and increase of the white-tailed deer. Virginia has been no exception. The land-use practices of the past 30 years set the stage with the establishment of forest-fire controls on cutover lands and the great agricultural land abandonment. This, coupled with the Game Commission's deer stocking program in the western mountain counties and the increased protection of deer in all counties gave the deer the impetus necessary. Surely they have succeeded beyond what the originators believed possible.

But, as with all successes, some headaches usually attend. Increased deer populations have brought up conflicts among those people mainly interested: the sportsman who hunts them, the farmer and forester who feed them, and the game manager who fostered them. The latter has the impossible job of satisfying all.

In Virginia this past season about 14,000 deer were legally harvested, nearly four times the number taken in 1947. Individual counties are now taking what the whole state did in 1940. A harvest of 4-6 adult bucks per square mile in some of our better deer range is not uncommon. One of our eastern military areas took an average of 13 bucks *and* 12 does per square mile this year! Yes, deer-wise, we are living high on the hog, riding the crest of the wave. How long can it last? That is the question.

No single statement can adequately cover the state deer situation since some counties are just nicely started, but roughly, of our 18,000 square miles of deer range, 9,000 is stocked to capacity and over. In the season just passed, 11,700 deer of the total 14,000 came from this fully stocked area.

How do we know when a range is stocked to capacity? Since every living thing's main concern is food, how a deer gets it, where he gets it and whether or not he gets enough give the answers. The first symptoms pointing to the approach of this capacity is very often increased crop damage. Later comes the heavily used forest browse plants and then the deterioration of the physical being of the animals themselves. The presence of adult bucks with poorly developed antlers and the lowered fertility

of the doe deer all point to the fact that they are not being properly fed. Other symptoms include late breeding activity, the early shedding of antlers by the bucks and the rough appearance of coats. All of these are definite signs that all is not well. To half starve them is as great a sin as permitting the final horrible death itself.

Half of the adult bucks in some of our counties have only spike antlers in the fall, many of them no larger than buck fawn buttons. In others, many of the bucks shed their antlers before the season is half over. In the same areas, the fertility of the doe deer has already been reduced from 20 to 50 percent of normal. Also, overbrowsing of forest food plants and crop damage to farmers is becoming more serious each year. These are facts that support the beliefs of ranges with enough deer —not in Pennsylvania or Michigan, but in Virginia.

What is the answer? First, you have to decide what you want for a deer herd. Do you want hundreds of thousands of poorly fed, poorly antlered and very unproductive deer? Or would you settle for fewer deer that can be in better health and have a chance of getting a fair rack more than once in your lifetime? We have only one logical management tool that will permit achievement of the latter goal and that is to harvest fully the herds when they approach the capacity of their ranges. Full harvesting of deer herds calls for the taking of both sexes.

The number of these antlerless animals (does and fawns) that should be taken annually depends upon the status of that particular herd at the moment. In most cases, merely a check of the population's growth is called for; in some, actual reduction in deer numbers is needed. To check the growth of a deer population, the number of does and fawns taken should at least equal the number of adult bucks. In the more productive areas, this take should be more lenient, to the point of equal numbers of bucks and does at least.

The objectives of our deer management recommendations are aimed at the production of top numbers of top quality animals. It is the wish of your Game Commission to set the regulations that will achieve these objectives, within the capacities of the various deer ranges in Virginia. In no other way can the conflicting interest in the products produced from and around forest areas be resolved.

In 1956, nearly 30 of Virginia's 81 deer counties are ready for and capable of producing more deer and all the by-products of the sport. Delaying this action will definitely shorten the time before that crested wave of deer we are riding breaks, because—it's later than you think.

A SHOT IN-THE-ARM FOR YOUR CLUB

By HENRY P. DAVIS

The success of any sportsman's club or fish and game organization depends primarily upon the ability of those officials at the helm to maintain at least a healthy degree of continuing enthusiasm among the rank-and-file membership. As the interests of the members are widely varied, this requires a diversified program, which, in turn, calls for considerable ingenuity on the part of those planning club activities.

Perhaps the majority of sportsmen's clubs throughout the country suffer from a lapse of interest in club affairs during at least one period of the year. This period is not the same for all clubs, for it varies with conditions. It may be during the height of the fishing season or when the hunting season is in full sway. Or it also may be during that period of field activity which comes between seasons. One thing, however, is sure: whenever it does occur, committee chairmen are exceedingly hard put to provide programs sufficiently attractive to draw a satisfactory attendance at regular meetings.

With many clubs in many areas that low interest is presently at hand. Hunting seasons are on the wane or even closed; good fishing opportunities are still in the offing. The most successful club programs are usually those in which the members themselves can participate. And there is an exceedingly valuable organized activity that admirably fits into this category and, at the same time, contributes much to the solving of a problem in which all outdoorsmen are vitally concerned . . . . . the reduction of hunting accidents.

This is the National Rifle Association's Hunter Safety Program, an educational activity which can be pursued with profit to adult and youngster alike at any season of the year. It is an ideal activity in which the experienced sportsman can impart his knowledge to the junior members of his club — the youngsters who will be the active sportsmen of tomorrow.

To become an instructor in this program one need not be an expert marksman, for fine marksmanship is not the primary objective. The program stresses *proper* gun handling in circumstances met in the hunting field. All instructors must have a basic knowledge of hunting and gun safety, but of even greater importance is the ability to pass that knowledge along to others. Every club in the country has a number of members well qualified for such an undertaking and full information on

(*Continued on page 23*)

Highlights of Virginia's 1955 Fish Program

(From the special report to the Sport Fishing Institute)

In 1955, as in past years, Virginia's efforts to provide fishing for an ever-increasing number of anglers were channeled toward three major fields: fish propagation, acquisition and development of new and existing fishing waters, and the expansion of management and fact-finding activities.

The output of two-year-old brook and rainbow trout from two trout hatcheries was up approximately 10 per cent over 1954, as was production of two-year-old fish from their three warm-water hatcheries. Two of the warm-water hatcheries produce smallmouth bass, rock bass, and yellowbelly sunfish, and one hatchery propagates largemouth bass, black crappies, and bluegills.

Further expansion of Virginia's long-range public pond building program was made during 1955. With the opening of 77-acre Clay Brittle Pond in Fauquier County and 175-acre Brunswick County Pond on June 20, the Commission has now made available for public fishing a total of six new ponds comprising almost 600 acres since 1950. Ruritan Lake, located in Fluvanna County, was constructed and stocked during 1955. This 70-acre pond will be open to the public on June 20, 1956. Many potential pond sites in areas presently deficient in public fishing were likewise examined during the year and catalogued for future reference. The most common causes for turning down potential sites were found to be: (1) poorly watersheds; (2) inadequate or excessive drainage areas; (3) prohibitive costs of dam construction due to topography and soil type; (4) inability to impound sufficient acreage; and (5) difficulty in securing property rights by donation as required by Commission policy.

One of the highlights of Virginia's fish program in 1955 was the authorization of the Commission of Game and Inland Fisheries enabling expansion of management and fact-finding activities of the Fish Division. As a part of these expansion plans, two biologists were hired during July. They plan ultimately to place five biologists in the field. Two of these men will be assigned to districts west of the Blue Ridge; three will be in eastern Virginia.

Each of these biologists will play an important part in all phases of the newly expanded fish program including such items as acquisition and development of new waters and acquisition of access to existing ponds and streams. Their major efforts, however, will be directed to the prosecution of Dingell-Johnson fact-finding investigations within their districts.

Since little or no comprehensive survey of Virginia's trout and smallmouth bass streams has been made in recent years, the two men to be assigned west of the Blue Ridge Mountains will be responsible for conducting such activities. Physical, chemical, and biological characteristics of these streams will be investigated, and such information will be used as a guide to future management and stocking practices.

In addition to the general survey, several short-term investigations designed to answer specific questions will be undertaken. On top for immediate action is the question of how best to spread out "put and take" trout fishing over a longer period of time and to relieve the time-honored "opening day" rush. Virginia biologists plan to attack this problem by making several successive "in season" trout plants in pre-determined and well marked closed areas on certain experimental streams located on National Forest lands. They believe that the gradual migration of these trout from the closed areas to the areas open to fishing will be an important factor in spreading the harvest. Also, for those streams where in-season plantings appear impracticable, they plan to evaluate the effectiveness of certain specific patterns of pre-season releases.

The projects assigned to the biologists located in eastern Virginia concern various aspects of impoundment management.

One problem constantly noted in routine impoundment analyses, including the smaller impoundments of "farm pond" size, was the usually consistent pattern of decreased fishing success after a period of three or four years. Population data derived from netting samples, rotenone samples, and actual drainage revealed one population characteristic held in common by all such ponds. All contained dis-proportionate numbers of intermediate size pan fishes, such as bluegills and crappies.

In an effort to relieve this unequal size group distribution of pan fishes, a series of 50 ponds, ranging from typical farm ponds to larger public impoundments, will be drained. After the population has been sorted, the intermediate size group of pan fishes will be destroyed and the remainder returned to the pond. These ponds will be closely followed for a period of three years to evaluate the effects of such removal. Agreements with private pond owners will be made to expedite the study.

Comparison of creel census and fish population data from previous seasons with the first year of year-round fishing in impoundments indicated the following:

(1) Changes in the pattern of fishermen usage following the introduction of year-round bass fishing were considered most desirable. More fishermen took advantage of more opportunities to fish without any periods of intense fisherman concentration such as commonly followed the onset of "opening day" under the old "closed season" regulations.

(2) The total bass harvest remained essentially the same but was spread out over a longer period and resulted in the capture of a proportionately greater number of large bass the previously closed spring months.

(3) No alterations in fish population composition attributable to relaxed bass fishing regulations were observed.

Theodore Roosevelt—famous statesman, writer, soldier, big game hunter, explorer, and conservationist.

THEODORE ROOSEVELT

By

ROBERTS MANN

and

DAVID H. THOMPSON

THEODORE ROOSEVELT, 25th president of the United States and one of the greatest, was born on October 27, 1858. He became famous as a statesman, conservationist, writer, soldier, big game hunter and intrepid explorer. He endeared himself to the common people—the plain folks—because he was so very human, with an irrepressible sense of humor, and so intensely American. They admired his sincerity, great courage and driving vitality. They called him "Teddy," the Rough Rider, who scorned "weasel words" and carried a "Big Stick" to use on "malefactors of great wealth."

He was a vigorous apostle of The Strenuous Life and is remembered as an athlete who, during his terms in the White House, loved to box with his younger aides, play tennis, take long walks, and go on hunting trips in wild country. When army officers protested an order that they prove their fitness by riding 90 miles on horseback within 24 hours, he did it himself between two busy days. He was a human dynamo with amazing energy.

The most remarkable fact, however, is the contrast between what he was as a man and what he had been as a child. In his autobiography, Theodore Roosevelt wrote: "I was a sickly, delicate boy, suffered much from asthma, and frequently had to be taken away on trips to find a place to breathe." Often, at night, he had to sit up in bed, gasping, with his father and mother trying to help him. Being very near-sighted, he was awkward and clumsy. When still quite small, he began to take an interest in natural history but, as he says, "the only things I could study were those I ran against or stumbled over."

When about 13 he took lessons in taxidermy and received his first gun. He was puzzled to find that "my companions seemed to see things to shoot at which I could not see at all. One day they read aloud an advertisement in huge letters on a distant billboard, and then I realized that something was the matter, for not only was I unable to read the sign but I could not even see the letters. I spoke of this to my father, and soon afterwards got my first pair of spectacles, which literally opened an entirely new world to me. I had no idea how beautiful the world was until I got those spectacles."

Roosevelt always had great sympathy for children who, because of poor eyesight, poor hearing or some other physical handicap, "are often unjustly blamed for being obstinate or unambitious, or mentally stupid." He soon learned to always carry an extra pair of spectacles in his pocket and, after some experiences on his ranch in North Dakota, had his spectacle cases made of steel. It was one of those steel cases that saved his life in 1912 when, speaking at Milwaukee during his campaign for the presidency on the "Bull Moose" ticket, he was shot by a crazed fanatic.

Born of wealthy parents, Theodore Roosevelt could have become and lived as an idle invalid. Instead, he set out to overcome his handicaps. He proved the doctrine he always preached: that a man can do what he wills himself to do; that a man with determination and courage can succeed in doing the difficult things and the finer things in life. By his words and deeds he kindled fires in people and revitalized the American nation.

Our conservation movement, for example, stems from the "Conference of Governors" which he gathered at the White House to consider, for the first time in America, the vital question of the conservation and use of the great fundamental sources of the nation's wealth—its natural resources.

Theodore Roosevelt cast a long shadow.

The Robin

By EDYTH WILLS

We once loved a bird in this state,
Who migrates quite early, and late.
The school children voted: but Garden Clubs noted,
As State bird he just didn't rate.

THE limerick above describes a phase of the robin's history in the state of Virginia. For many years he was our unofficial state bird. School children and a number of adult groups backed him by a wide majority. Twenty or more years ago numerous book covers, quilts and fancy pieces were made using the robin as the "state bird" design. Robin is one of the first birds that children learn and want to know more about His natural liking for human society has made him half tame, and he is one of the best examples of a bird that has benefited greatly by contact with civilization. It is a moot question whether man has not benefited the more from the knowledge and pleasure gained by intimate observation of the robin and his affairs.

A favored bird of the poets, it is not just by poetic license that robin is called "the bird of the morning," the first bird song heard. His awakening song is in full swing before the red-faced sun parts the gray and golden drapery of dawn; often the moon will still be bright in the southwest. He does not serenade at night, however. He sings steadily for over five minutes on one side of the house where he has roosted, tail slightly spread; then flies around another corner of the house, to begin again. Even in early spring when the dawn's surly light is fogged by frost his sweet rippling notes lack nothing of cheerfulness.

Full of verve, he soars out of the trees as soon as he has cleared the night air out of his famous chest, which looks so curvy and bright that we suspect he might bounce on it when he hits the grass. He takes a dip in the garden bath, it being too early for even an inquisitive sparrow to perch on the rim and be showered. Robin flaps away noisily, clucking and well pleased with himself at another day begun with satisfaction. Perhaps it is the day the female robins will arrive in migration, and there will be gay remembering around the remains of last year's nests. One family of robins in a garden will furnish half the seasons vitamin quota needed for a bird study beginner; robin is the least timid of birds, and one may pry into his private life and analyze his actions like a boy taking apart his first Ingersoll watch.

His three or four of a brood will hatch from eggs of clear pastel blue, and he may dispose of the fragments by dropping them down your chimney into the fireplace. The plump nestlings show the spotted breast of their thrush ancestry, and their lively movements make the well made mud-lined nest show wear and tear. Robin likes to work string, rags and often paper into the nest. He builds in tree crotches or limbs, on man-made shelves therein or in the elbow of a drainpipe. The slings and arrows of outrageous fortune seem to make special targets of robin young. The parents are courageous and devoted, but waste no time repining over an accident; they take it as part of being a bird.

What has robin got that other birds haven't? Color, song, interesting life pattern, he has them all, lacking the imitative faculties of the mockingbird; but mockingbird lacks the artless simplicity and that winsome friendliness to bird and man that is second nature to the robin. The robin's only weakness is getting a bit "tight" on berries of Tartarian honeysuckle. He will stagger and strut, and even fledglings will start fighting with each other if fed too many of the berries.

I do not agree with critics who say the robin has mediocre intelligence, as birds go. He has a calibre that often comes out only in life's emergencies. I had watched Mrs. Robin carry mud to her nest, dip material in the bird bath, mould the lining with her body, then stand watch nearby until it dried. Later, she suddenly became a widow, possibly from the deadly BB of the neighborhood terror. But she raised two husky young all by herself, to the stage where they were as large as she and no longer paid her any mind when she called them with impatient upward jerks of her tail at each call. The first settlers in Virginia welcomed robin as a reminder of the English robin redbreast of song and story, a smaller bird with a dark beak but with some habits similar to our robin.

When robin makes the run, stop, look and listen coverage of the lawn, the naturalists say that he can hear the worms working from underneath. I do not mind a bit his helping himself to a few cherries and grapes not worth bagging. He is entitled to that commission for ridding us of four times that number of insects. The robin is one of the seven keys to spring; along with pussy willow, daffodils, forsythia, and other things in that clear, new yellow, cooler than the deeper gold developed in the spectrum of summer. Robin has been spreading his range westward and much farther north for a number of years. He is state bird of Wisconsin and Michigan. Travelers in Cuba see him in winter, but not singing at all.

The month of March in Virginia says of the robin, "I can get him for you wholesale." I do not think it necessary to stock the feeding shelf heavily when insects are plentiful. A small boy was much amused to see robin devour spaghetti scraps for "cooked worms." But his experiment to fool the birds with a handful of long white, pink-tipped sprouts from potatoes did not work. So all we need to do is to put out bread crusts, pastry crumbs, cereal scraps and apple cores, and yours will be the lucky home lot where is found

"A tree that may in summer wear,
A nest of robins in her hair."

A SHOT-IN-THE-ARM (*Continued from page 19*)
how to become rated as an official instructor and how to conduct the program may be obtained by writing the National Rifle Association, 1600 Rhode Island Avenue, N. W., Washington 6, D. C. Instructor guides and other training material are available from this source. This material includes manuals, handbooks, registration cards, identification cards and brassards. A small charge is made for them.

The effects of the NRA Hunter Safety Program are almost immediately felt in any sporting activity in which guns are used. Not only is the desire to handle guns safely immediately apparent, but a spirit of sportsmanship is also engendered. And of exceeding importance is the closer understanding created between adult teacher and youthful student.

Interest in the Hunter Safety Program is increasing rapidly. Some states, recognizing the advantages of such a program, have made completion of the Hunter Safety Course, or other plans similar to it, a perequisite to purchasing a hunting license for junior shooters. In other areas, the course is being presented as a voluntary public service by regularly organized rifle clubs, sportsmen's groups, Boy Scouts, Y. M. C. A., 4-H Clubs, Police Athletic Leagues, service clubs and others. Among the states sponsoring programs of this type are New Hampshire, New York, Pennsylvania, California, Ohio, Illinois and Virginia.

Such a program is a sure-fire interest-creator for any club. And it might very well lead to enthusiasm that will grow into state-wide proportions. In addition to that provided by the National Rifle Association, there is a quantity of helpful material available free to the sponsoring club or its instructors. For instance, the Shooting Promotion Section, Remington Arms Company, Inc., Bridgeport, Conn., will provide, upon request, reasonable quantities of any of the following items: *How to Shoot* cartoon booklet, The Shooting Adventures of Doc Peters, Ten Commandments of Safety posters, paper practice targets, which include bird and animal targets, standard short range targets, the Ranger target, the 'Dot' target, precision sighting-in charts, and the flyspeck target.

Investigate this NRA Hunter Safety Course and eliminate the present interest lag in your club's program by giving it a shot in the arm. Not only will such a program contribute much toward safer hunting seasons in the future, but will provide a lot of constructive pleasure for the members.

"By now most people are acquainted with the well-worn saw that poor land makes poor people—both in numbers and quality. In time they will learn of such soil also that its deer and turkeys, its rabbits and quail, its coons and muskrats will be few, and frequently poor. In our present exploratory enterprise it will behoove us to get that well in mind. We are laying the foundation for a sound understanding of what is involved in growing wildlife crops for hunting, fishing, and—most of all-just enjoying. The story starts with the soil and, likely enough, comes back to it in the end."

Durward L. Allen, *Our Wildlife Legacy*

Cumberland Gap Becomes National Park

Cumberland Gap, the Appalachian gateway to the peopling of the American West, has been created a national historical park. This action is the culmination of a 35-year effort to have the area preserved.

Three states contributed more than 20,000 acres of scenic mountain land to the park. The Gap itself is located where the sharp southwestern edge of Virginia joins the Kentucky and Tennessee borders. From Pinnacle Rock, 3,000 feet high, park visitors can see Georgia, Alabama and North Carolina on clear days.

Cumberland Gap was for centuries the Indian path into the hunting grounds of Kentucky. First white discoverer in 1750 was Virginian Dr. Thomas Walker who built "Castle Hill" in Albemarle County about the same time. A score of years later Daniel Boone, seeking the route of the Wilderness Road, gave the first important impetus to the gap as the way to the West.

Bierly Painting Wins Duck Stamp Competition

Virginia artist Edward J. Bierly, of Arlington, has won the seventh annual "duck stamp" competition with his black and white watercolor featuring a pair of American mergansers flying low over fog-bound water. His design will be used on the 1956-57 migratory bird hunting stamp which will go on sale July 1 and must be purchased by everyone over 16 who hunts migratory waterfowl.

Readers of *Virginia Wildlife* will take particular interest in this year's award since Bierly is the artist who painted the wood duck on the cover of the December 1954 issue of the magazine. Last year he was runner-up in the duck stamp contest. This year's runner-up was C. G. Pritchard, of Lincoln, Nebraska, with his picture of three mallards. Third place went to Stuart Ferreira, of Owatonna, Minnesota, for his design of old squaws.

A total of 64 designs was submitted by 42 artists in this year's contest. Judges said the entries were conspicious for their fine quality. Twenty-one states were represented by entries and there were two from Virginia.

Duck stamp revenues are used to supplement other funds appropriated to the Fish and Wildlife Service for the purchase, development, administration and maintenance of waterfowl refuges through the country.

Virginia artist Edward J. Bierly's winning black and white watercolor drawing that will be used on the 1956-1957 "duck stamp."

Another 12-Year-Old Turkey Hunter

In the December issue of *Virginia Wildlife*, we said we'd like to hear from others who could match or better the feat of 12-year-old Glenn E. Fant, Jr., who bagged a 16-pound wild tom turkey in Nottoway County.

In response, Mrs. Robert J. Lester of Ballsville, informs us that her 12-year-old son, Robin, also killed a wild turkey last year, a 10-pounder. Both deserve much credit for outwitting this wild and wary bird.

National Hunting and Fishing Survey Under Way

The first scientific survey of the economic aspects of hunting and fishing in the United States has been undertaken by the Fish and Wildlife Service of the U. S. Department of the Interior. The results are to be of "great strategic importance in defending wildlife resources against competing pressures from the use of lands and waters," according to the National Wildlife Federation.

The study is being financed from the Fish and Wildlife Service's administrative share of the revenues collected under the Pittman-Robertson and Dingell-Johnson acts of Congress, laws which earmark the collections from excise taxes on sporting arms and ammunition and sport fishing tackle for programs of federal-aid to the states in game and fish restoration projects.

The inquiry will try to find out how many people hunted and fished for sport in 1955, both licensed and unlicensed. Questions will seek age and sex of sportsmen, time devoted and money spent for equipment and other expenses connected with hunting and fishing. It is expected that answers will help point the way for future public programs in game and fish management.

It is known that more than 30 million hunting and fishing licenses are sold in the 48 states each year. However, few states require fishing licenses for coastal waters and many may hunt or fish without licenses because of special exemptions. The total contribution of hunting and fishing to the nation's business has been variously estimated from five to eleven billion dollars annually. The results of this survey should help to fill the gaps with more definite information.

German Magazine Comments on Virginia Wildlife Article

The German magazine, *Wild und Hund,* commented in its roundup of world wildlife news in the December issue, on Joe Coggin's article, "Bloodhounds on Killer Dogs" in the November *Virginia Wildlife.*

The magazine was struck with Game Warden Hunter Perry's novel idea of hunting down sheep-killing dogs with the aid of well-trained bloodhounds.

Incidentally, the German wildlife publication is received with much interest at the office of the Commission and has been admired for its effective makeup, with many excellent photographs and interesting variety of textual material.

Time to Plant Dogwoods

Nursery-grown white dogwood trees may be planted in fall, winter or spring if they have a good ball of earth at the roots. The small to medium sizes give better results than the large trees for transplanting purposes.

A leaflet, "Transplanting Dogwood," is available from the office of your county agent or from the department of horticulture of the Virginia Polytechnic Institute, Blacksburg.

Test Trip in the Wilderness

Special Services Officer Max Carpenter sends us the report of a conservation-education experiment which should have wide appeal and great future possibilities.

George W. Kent, professor of psychology at Bridgewater College, and two other professors from the Virginia college took three boys on a two-week canoe trip into the Quetico-Superior Wilderness Area of northern Minnesota. The trip was a test run to study the reaction of the boys to such an experience, with the idea for the future of making several trips during the summer, with a larger number in each party.

The idea behind the venture, according to Professor Kent, is to teach young people to appreciate, enjoy and learn how to treat the outdoors. Too many people, he believes, may take rolls of kodachrome pictures yet never really see anything to retain in their own memories and too many others leave a trail of empty cans and trash instead of clean campsites for the next explorers.

Rig Fishing in the Gulf

Drilling for offshore oil in the Gulf of Mexico has brought a new sport to Louisiana anglers, according to Grits Gresham in the *The Fisherman Magazine.*

The drilling required platforms and "for reasons best known to the fish" tens of thousands congregate under these structures. Now "fishing the rigs" or "rig fishing" is a newly popular form of angling.

U. S. Forest Service Photo

Roy Rogers and "Smokey the Bear" get together for a special radio program to be used as part of the nationwide 1956 Cooperative Forest Fire Prevention Program.

New Albemarle Pond Attracts Waterfowl

Charles M. Stevens reports in *The Raven,* bulletin of the Virginia Society of Ornithology, that Langhorne's Pond, in Albemarle County, has become a new and popular gathering place for migratory waterfowl.

The 20-acre pond, built in the summer of 1953 near Scottsville has become, he says, "the best waterfowl and shorebird spot in the county," surpassing 25-acre Henley's Lake near Crozet which used to be tops.

Since the summer of 1954 Langhorne's Pond has produced seven species new to the county: Louisiana heron, golden plover, ruddy turnstone, sanderling, dowitcher, red-backed sandpiper, and least tern.

The pond is entirely surrounded by open farmland. In August, as the water level drops, wide mudflats are exposed around the edge and it is here that shorebirds come in great numbers. The days following hurricanes Connie and Diane in 1955 were exceptional, writes Stevens. Through the winter of 1954-55 there was a flock of about 200 ducks of several species, but principally mallards, present on the pond.

Early Decision Sought on Potomac Fishway

Senator John M. Butler, of Maryland, has requested a decision by Comptroller General Joseph Campbell as to whether previous Congressional action cleared the way for the Army Engineers to build a fishway across Little Falls dam which is now under construction in the Potomac River near Washington. Butler is trying to find out why the Engineers are balking at incorporating recommended fish passage facilities in the dam, according to the Wildlife Management Institute.

The Little Falls dam, being built to augment the District's water supply, is located a short distance upstream from an old structure which has blocked the spawning runs of marine fishes for many years. Before its erection, the sea-run fishes spawned in an additional ten miles of the Potomac, upstream to the impassable Great Falls. During periods of high run-off or when breaks appear in the old structure, the fish do pass upstream.

A recommendation submitted unanimously by the Virginia Commission of Game and Inland Fisheries and the Virginia Commission of Fisheries, the Maryland Board of Natural Resources, the Maryland Game and Inland Fish Commission, and the U. S. Fish and Wildlife Service urges that a fishway be built over the new dam and over the old structure as well if it is to remain intact. Design criteria for such a fishway were submitted to the Engineers by the Fish and Wildlife Service in 1953.

A Believe It Or Not Bear Tale

Clemmer Miller, supervising warden of the Thomas Jefferson District, has sent in the story of an unusual bear hunting find which was reported to him by veteran bear-hunter, Ben Armstrong, of West Augusta.

Armstrong said the hunters could hear their dogs barking as if they had treed a bear. However, when the first hunter arrived on the spot, instead of seeing the bear in a tree the animal was squatting on a mound of leaves and sticks, surrounded by the baying hounds.

After the hunter shot and killed the bear, it was discovered that underneath the rubbish was the partly eaten carcass of a bear of perhaps eighty or ninety pounds. A bed was located where it was believed the smaller bear had been resting and there was evidence all around of a great struggle having taken place. The bear killed by the hunter likewise bore wounds of an encounter.

The Augusta County bear-hunters were inclined to believe that, unusual as such a happening would be, the larger bear had killed and was eating the smaller one when the dogs surrounded him and that he stayed on the ground to protect the kill. Such an event has never before come to our attention and there may be some other plausible explanation for the circumstantial evidence. If any of our readers have ever heard of a similar instance, perhaps they will let us know.

Ernest Thompson Seton, in his "Lives of the Game Animals," Volume II, Part 1, says "That they do, at times, settle their differences by mortal combat . . ." He cites the report of Edmund Nagle, the fur trader of Athabaska Landing.

"In the October of 1877," said Nagle, I was out walking near the Landing, when, across the lake, I saw two bears approaching each other—a two-year-old and a bigger one. When they got near, they began shying around each other in silence, then 'woof-woofing! Then they grappled and rolled over and over. Before I could get around to the place, the little one was killed, and his bowels torn out . . . The Indians says that such fights often occur."

Seton's Indian guide also observed a case of cannibalism on the Upper Ottawa about 1890. However, cannibalism among bears is as rare, in Seton's opinion, as among human beings.

Golden Eagle Killed on Shenandoah Mountain

Max Carpenter, special services officer for northern Virginia, sends us a report on a golden eagle, *Aquila chrysaetos canadensis*, that was shot near Bergton on Shenandoah Mountain January 9, 1956. It had a 7-foot wingspan, was 36½ inches long and weighed 12½ pounds.

Raymond Crist, left, and Max Carpenter, right, with a rare golden eagle.

This makes the thirty-sixth known record of this bird being shot in Virginia. Because of its rarity, it is hoped that people will not shoot them when they see them.

This eagle was turned over to the Commission and will be mounted to add to the growing collection of native birds and mammal mounts being assembled by the Commission.

Constructive Projects of Smith River Wildlife and Soil Conservation Club

The Smith River Wildlife and Soil Conservation Club have been conducting an active program of sowing wildlife strips in the community.

Also, through the efforts of this club, a breeding pen for wild turkeys was built. James L. Wood and C. Henry Worley cared for the pen for two years and secured several turkeys in the Blue Ridge Mountains at the head of Smith's River. With the help of Game Warden Frank C. Hylton, of Stuart, they hope to do more and more for wildlife conservation each year. For one thing, they are anxious to get deer into the nearby mountain soon.

New I. W. L. A. Chapter Receives Charter

On January 17, 1956, at Gretna High School the Pittsylvania chapter of the Izaak Walton League of America received its new charter from state president of the League, C. I. Van Cleve. The charter, signed by 61 charter members, was presented to George Hedrick, the new chapter president.

This chapter is made up of sportsmen, farmers, professional men and businessmen, all dedicated to unselfish service to preserve and restore our heritage of all natural and renewable resources.

County game warden Sammy Pickrel was awarded a founder's medal for the outstanding job he did in founding the new Izaak Walton League chapter.

Wildlife Questions and Answers

Ques.: My copy of the fishing law digest states that west of the Blue Ridge Mountains the season for smallmouth bass, largemouth bass, spotted and rock bass is from June 20 to Dec. 31. However, a friend of mine tells me that, upon inquiry at the offices of the Commission he was told that the season would continue until April 30. Can you straighten me out on this regulation?

Ans.: The 1955 fishing law digest stated the regulation as you have it. However, at the fall meeting of the Commission, during which proposed changes in 1956 fishing regulations were passed upon, the season was extended to April 30. Effective December 1st, 1955.

Ques.: Is the pickerel just a destructive fish or has it some useful qualities besides being edible though bony?

Ans.: Yes, indeed, the pickerel performs a necessary function in its habitat. The predatory feeding habits and voracious appetite for which it is criticized make it effective in keeping down the numbers of forage and panfish so that the remainder may grow more rapidly and be more attractive to fishermen. This is especially important in weedy ponds and streams in which the pickerel is found because it is there that the largemouth bass is seldom able to keep the panfishes from overriding their food supply, with consequent stunting. The pickerel is a sporting fish itself which fights well when hooked, especially at or near the surface.

Ques.: Does the white-footed mouse ever come into houses of its own accord? We have some mice which I have been told are white-footed mice, but I did not think they would come indoors. Could you describe them for me?

Ans.: The white-footed mouse normally lives in woods, brushy fields, thickets, and sometimes even in houses. The adult is chestnut brown on the back and the juvenile is gray, while both have white bellies and feet. Most noticeable features are their great black eyes, long whiskers, long tails and large ears. It closely resembles the deer mouse which is the most abundant mouse on mountain slopes. The white-footed mouse is nocturnal and seldom seen abroad during sunny hours.

Ques.: Is it true that there were horses in Virginia in prehistoric times?

Ans.: Yes, the horse, **Equus complicatus**, was not uncommon in the region and its bones have been recovered at five Virginia localities. Also, the tapir, **Tapirus haysii**, an animal related to the rhinoceros and the horse, but resembling the pig in appearance, was in ancient times an inhabitant of what are now Wythe and Warren counties. Today the tapir occurs only in the tropical forests of Central and South America and in South Asia, suggesting how much our climate may have changed.

Ques.: Have grouse ever been stocked in Virginia?

Ans.: No, grouse have never been stocked in Virginia. Wherever they occur, they may be considered an entirely native species.

"Look, Mom, he still has his pajamas on."

Ques.: I have heard that swans mate for life. Is that true and does it hold for all waterfowl?

Ans.: It is true that swans—and geese too—usually mate for life. Ducks, however, remate each year.

Ques.: Since it is much easier to hunt squirrels in September and most hunters I know prefer an open season at that time, why is there so much objection to it by many others?

Ans.: The objection to the early squirrel season is that many helpless young squirrels die in their nests when their mothers are killed at that time of year. That means less squirrels for next year's hunting. I believe that you will find much less objection to a later season among those who understand this reason and have future rather than just present hunting in mind.

Ques.: Are there many marine mammals in Virginia waters? I mean such animals as whales, dolphins and seals.

Ans.: Indeed there are and among this group are some of our largest and most interesting mammals. The order of whales, dolphins, porpoises and blackfish is by far the most numerous. Actually the last three are small whales. The other types of marine mammals are very few in number. The harbor seal is the one less likely to be encountered.

Ques.: When migrating birds return in the spring, do the males and females travel together?

Ans.: According to naturalist Alan Devoe, as a rule they do not return together. Among most birds, the males return north well in advance of the females. Male redwing blackbirds, for example, return as much as six weeks ahead of the females. Though some kinds of birds travel together, the earlier arrival of the males is very general.

Ques.: Does the number of rattles on a rattlesnake's tail show how old it is?

Ans.: The number of rattles is, at its best, a rough and unreliable means of computing the snake's age. A rattlesnake may be born with two rattles. It may add three or four a year thereafter. After it has reached maturity, it may hardly add any more. Furthermore, especially in the case of an old snake, the buttons of the rattle break off easily.

Ques.: Do owls and hawks have any value to balance their destructive activities?

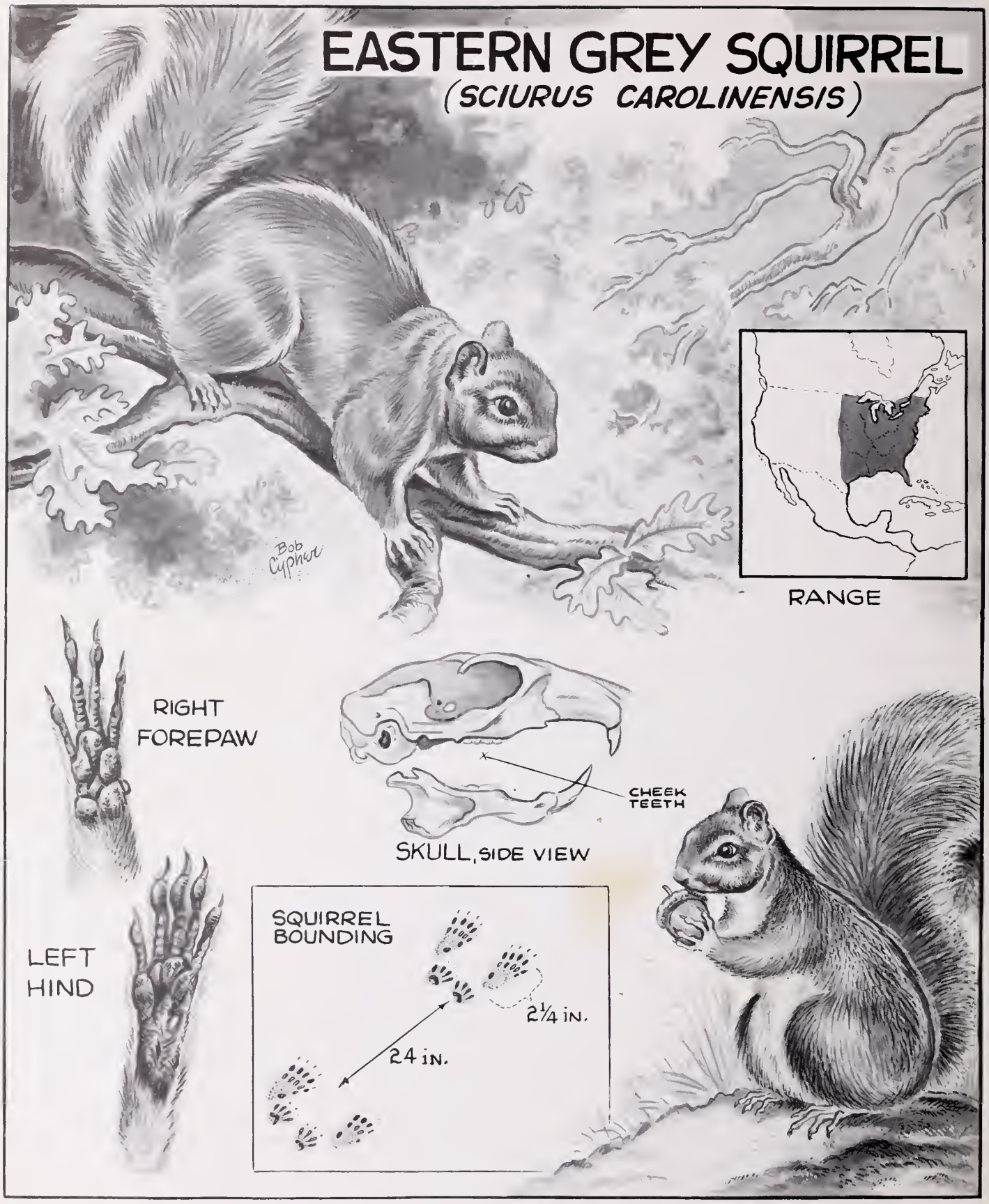
Ans.: Indeed they do. They are very beneficial in controlling rodents and have actually only a negligible effect on the bird population.

Ques.: Can birds move their eyes in the sockets the way we do?

Ans.: No, a bird can move its eyes only very slightly, so that to watch a moving object for any distance, it has to keep turning its head.

Ques.: Have coturnix quail and chukar partridges ever been released in Virginia?

Ans.: We cannot find any record of coturnix quail having been released in the state. Chukars have been released, but have never been successful in establishing themselves. In fact, it does not seem that either of these birds has ever been successfully established east of the Mississippi.



The gray squirrel is one of Virginia's most abundant game animals and is found in every county in Virginia.

Squirrels make their homes in hollow den trees and many, especially in summer, construct leaf nests in the fork of a tree or even in the swaying outer branches.